

COMMONWEALTH OF VIRGINIA
Department of Environmental Quality
Valley Regional Office

STATEMENT OF LEGAL AND FACTUAL BASIS
Significant Permit Modification

Virginia Electric & Power Company aka Dominion
Bremo Power Station
1038 Bremo Road
Bremo Bluff, Virginia 23022
Permit No. VRO40199
Effective Date: April 29, 2004
Expiration Date: December 31, 2007

As required by 40 CFR Parts 70 and 72 and 9 VAC 5 Chapter 80, Virginia Electric & Power Company aka Dominion - Bremo Power Station has applied for a significant permit modification to the Acid Rain Operating Permit for its power plant in Bremo Bluff, Virginia. The Department has reviewed the application and has prepared a draft modified Acid Rain Operating Permit.

Engineer/Permit Contact: _____ Date: _____
Kelly R. Showalter
(540) 574-7843

Air Permit Manager: _____ Date: _____
Sharon G. Foley, P.E.

Deputy Regional Director: _____ Date: _____
Larry M. Simmons, P.E.

REQUESTED MODIFICATION

On April 11, 2006, the Valley Regional Office (VRO) received a request from Virginia Electric & Power Company - Bremo Power Station (Bremo Power Station) for changes to its Article 3 Federal Operating Permit. Bremo Power Station has requested that the permit be changed to incorporate their minor New Source Review (NSR) permit, dated July 29, 2005. The changes are considered a significant modification to the permit, as defined in 9 VAC 5-80-590.

REASON FOR MODIFICATION

The Bremo Power Station's minor NSR permit was issued to modify and operate a Syn Fuel Plant. This permit included a Syn Fuel Plant with a maximum rated capacity of 150 tons per hour and consisting of a fixed grate grizzly screen (NSPS, Subpart Y), four conveyors (NSPS, Subpart Y), two pug mixers, two briquetters, a radial stacker, two raw binder tanks, a mixing tank, and a finished binder tank. Due to the issuance of the July 29, 2005 NSR permit, the Article 3 Federal Operating Permit should be modified to incorporate the new applicable requirements. The July 29, 2005 permit was issued so Bremo could operate a Syn Fuel Plant (ES-6). The following permit conditions from the July 29, 2005 permit are new applicable requirements. Condition numbers refer to those contained in the July 29, 2005 permit. A copy of the permit is included as Attachment A.

- Condition 3: Particulate emissions from the Syn Fuel Plant shall be controlled by enclosure and wet suppression. The enclosure and wet suppression system shall be provided with adequate access for inspection.
- Condition 4: Fugitive dust controls shall include the following, or equivalent, as a minimum:
- a. Dust from material handling, crushers, and transfers shall be controlled by wet suppression or equivalent (as approved by the DEQ).
 - b. All material being stockpiled shall be kept adequately moist to control dust during storage and handling or covered at all times to minimize emissions.
 - c. Dust from haul roads and traffic areas shall be controlled by the application of asphalt, water, suitable chemicals, or equivalent methods approved by the DEQ.
 - d. Reasonable precautions shall be taken to prevent deposition of dirt on public roads and subsequent dust emissions. Dirt, product, or raw material spilled or tracked onto paved surfaces shall be promptly removed to prevent particulate matter from becoming airborne.

Condition 5: The processing of coal through the Syn Fuel Plant shall not exceed 1,314,000 tons/yr, calculated monthly as the sum of each consecutive 12-month period.

Condition 6: Emissions from the operation of the Syn Fuel Plant shall not exceed the limits specified below:

Particulate Matter	0.57 lbs/hr	2.5	tons/yr
PM-10	0.27 lbs/hr	1.2	tons/yr
Volatile Organic Compounds		3.8	tons/yr

These emissions are derived from the estimated overall emission contribution from the operating limits. Exceedance of the operating limits shall be considered credible evidence of the exceedance of emission limits. Compliance with these emission limits may be determined as stated in Condition number 5.

Condition 7: Visible emissions from the Syn Fuel Plant shall not exceed 20% opacity as determined by EPA Method 9 (reference 40 CFR Part 60, Appendix A).

Condition 8: Except where this permit is more restrictive than the applicable requirement, the Syn Fuel Plant NSPS equipment (ES-6a and ES-6b) shall be operated in compliance with the requirements of 40 CFR Part 60, Subpart Y.

Condition 9: Visible Emission Evaluations (VEE) in accordance with 40 CFR Part 60, Appendix A, Method 9, shall be conducted by the permittee on the Syn Fuel Plant. Each test shall consist of 30 sets of 24 consecutive observations (at 15 second intervals) to yield a six minute average. The details of the tests are to be arranged with the Director, Valley Regional Office. The permittee shall submit a test protocol at least 30 days prior to testing. The evaluation shall be performed and demonstrate compliance within 60 days after achieving the maximum production rate at which the facility will be operated but no later than 120 days after permit issuance. One copy of the test result shall be submitted to the Director, Valley Regional Office, within 45 days after test completion and shall conform to the test report format enclosed with this permit. One copy of the test result shall be submitted to the EPA at:

Associate Director
Office of Air Enforcement (3AP13)
U.S. Environmental Protection Agency
Region III
1650 Arch Street
Philadelphia, PA 19103-2029

Condition 10: Upon request by the DEQ, the permittee shall conduct additional visible emission evaluations from the Syn Fuel Plant to demonstrate compliance with the visible emission limits contained in this permit. The details of the tests shall be arranged with the Director, Valley Regional Office.

Condition 11: The permittee shall maintain records of all emission data and operating parameters necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the Director, Valley Regional Office. These records shall include, but are not limited to:

- a. Annual amount of coal (tons) processed through the Syn Fuel Plant, calculated monthly as the sum of each consecutive 12-month period.
- b. Annual amount of latex binding (gallons) sprayed, calculated monthly as the sum of each consecutive 12-month period.
- c. Material Safety Data Sheets for each latex binding agent showing volatile organic compound content (percent by weight) and individual hazardous air pollutant (HAP) content (percent by weight).
- d. Monthly and annual cumulative emissions of VOC and each HAP (in tons) for the Syn Fuel Plant. The annual emissions shall be calculated monthly as the sum of each consecutive 12-month period.
- e. All visible emission evaluations.
- f. Scheduled and unscheduled maintenance.

These records shall be available on site for inspection by the DEQ and shall be current for the most recent five years.

APPLICABILITY OF 9 VAC 5-80-590

According to 9 VAC 5-80-590, significant modification procedures must be used for those permit modifications that do not qualify as minor permit modifications under 9 VAC 5-80-570 or as administrative amendments under 9 VAC 5-80-560. Bremo Power Station's proposal does not meet the specifications for administrative amendment or minor permit modification. The Regulations further list criteria, any of which, if met, require use of significant modification

procedures. The changes proposed by Bremo Power Station meet the following criterion, stated in 9 VAC 5-80-590 A.2:

Significant modification procedures shall be used for those permit modifications that require or change a case-by-case determination of an emission limitation or other standard, or a source-specific determination for temporary sources of ambient impacts made under 9 VAC 5 Chapter 40, 9 VAC 5 Chapter 50 or 9 VAC 5 Chapter 60, or a visibility or increment analysis carried out under this chapter.

The permit modification changes result in additions of case-by-case determinations of emission limits. Because the changes proposed by Bremo Power Station meet at least one criterion listed in 9 VAC 5-80-590 and do not qualify as an administrative amendment or minor permit modification, the change must be processed as a significant permit modification.

CHANGES TO ARTICLE 3 FEDERAL OPERATING PERMIT

The following additions and changes have been made to Bremo Power Station's Article 3 Federal Operating Permit:

Section I: The designated representatives were updated. Mr. Rives has been assigned as the Acid Rain representative and NO_x Account representative.

Section II: Included eight additional emission units (ES-6a through ES-6h)

Section V: Added Process Equipment Requirements (Syn Fuel Plant (ES-6)).

Condition V.A.1: Particulate emissions from the Syn Fuel Plant shall be controlled by enclosure and wet suppression. The enclosure and wet suppression system shall be provided with adequate access for inspection.

Condition V.A.2: Fugitive dust controls shall include the following, or equivalent, as a minimum:

- a. Dust from material handling, crushers, and transfers shall be controlled by wet suppression or equivalent (as approved by the DEQ).
- b. All material being stockpiled shall be kept adequately moist to control dust during storage and handling or covered at all times to minimize emissions.
- c. Dust from haul roads and traffic areas shall be controlled by the application of asphalt, water, suitable chemicals, or

- equivalent methods approved by the DEQ.
- d. Reasonable precautions shall be taken to prevent deposition of dirt on public roads and subsequent dust emissions. Dirt, product, or raw material spilled or tracked onto paved surfaces shall be promptly removed to prevent particulate matter from becoming airborne.

Condition V.A.3: The processing of coal through the Syn Fuel Plant shall not exceed 1,314,000 tons/yr, calculated monthly as the sum of each consecutive 12-month period.

Condition V.A.4: Emissions from the operation of the Syn Fuel Plant shall not exceed the limits specified below:

Particulate Matter	0.57 lbs/hr	2.5 tons/yr
PM-10	0.27 lbs/hr	1.2 tons/yr
Volatile Organic Compounds		3.8 tons/yr

These emissions are derived from the estimated overall emission contribution from the operating limits. Exceedance of the operating limits shall be considered credible evidence of the exceedance of emission limits. Compliance with these emission limits may be determined as stated in Condition number V.A.3.

Condition V.A.5: Visible emissions from the Syn Fuel Plant shall not exceed 20% opacity as determined by EPA Method 9 (reference 40 CFR Part 60, Appendix A).

Condition V.A.6: Except where this permit is more restrictive than the applicable requirement, the Syn Fuel Plant NSPS equipment (ES-6a and ES-6b) shall be operated in compliance with the requirements of 40 CFR Part 60, Subpart Y.

Condition V.B.1.a.: The permittee shall inspect and maintain weekly the fugitive dust emissions control system used to control fugitive emissions from the Syn Fuel Plant.

Condition V.B.1.b.: The permittee shall perform a daily visual survey of the Syn Fuel Plant for sources of visible emissions. All visible surveys must be

performed when the equipment is operating. The person conducting this survey does not have to be EPA, Method 9 certified. However, the individual should be familiar with the procedures of EPA, Method 9 including using the proper location to observe visible emissions. If during the survey visible emissions are observed, a visible emission evaluation (VEE) shall be conducted in accordance with 40 CFR Part 60, Appendix A, EPA Method 9, unless timely corrective action is initiated within two hours of the survey such that the equipment operates with no visible emissions within 24 hours of the initial observation. If a VEE is conducted, the individual performing the VEE must hold a current EPA Method 9 certification. The VEE shall be conducted for a minimum of six minutes. If any of the observations exceed the applicable opacity standard for the coal handling system, the VEE shall be conducted for a total of 60 minutes or until a violation of the opacity standard for Syn Fuel Plant has been documented, whichever period is shorter.

Condition V.B.2:

The permittee shall maintain records of all emission data and operating parameters necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the Director, Valley Regional Office. These records shall include, but are not limited to:

- a. Annual amount of coal (tons) processed through the Syn Fuel Plant, calculated monthly as the sum of each consecutive 12-month period.
- b. Annual amount of latex binding (gallons) sprayed, calculated monthly as the sum of each consecutive 12-month period.
- c. Material Safety Data Sheets for each latex binding agent showing volatile organic compound content (percent by weight) and individual hazardous air pollutant (HAP) content (percent by weight).
- d. Monthly and annual cumulative emissions of VOC and each HAP (in tons) for the Syn Fuel Plant. The annual emissions shall be calculated monthly as the sum of each consecutive 12-month period.
- e. All visible emission evaluations.
- f. Scheduled and unscheduled maintenance.
- g. Weekly log of fugitive dust emissions control system inspection to include the following:
 - (1) The date, time and name of the person performing

- each inspection;
 - (2) Results of the inspection; and
 - (3) The date, time, and type of corrective actions taken, if any.
- h. Daily logs of the visual survey of the Syn Fuel Plant to include the following:
- (1) The date, time and name of the person performing each survey;
 - (2) Whether or not visible emissions are observed and the suspected cause of such emissions;
 - (3) The date, time, and type of corrective actions taken.

These records shall be available on site for inspection by the DEQ and shall be current for the most recent five years.

Condition V.C.1:

Visible Emission Evaluations (VEE) in accordance with 40 CFR Part 60, Appendix A, Method 9, shall be conducted by the permittee on the Syn Fuel Plant. Each test shall consist of 30 sets of 24 consecutive observations (at 15 second intervals) to yield a six minute average. The details of the tests are to be arranged with the Director, Valley Regional Office. The permittee shall submit a test protocol at least 30 days prior to testing. The evaluation shall be performed and demonstrate compliance within 60 days after achieving the maximum production rate at which the facility will be operated but no later than 120 days after permit issuance. One copy of the test result shall be submitted to the Director, Valley Regional Office, within 45 days after test completion and shall conform to the test report format enclosed with this permit. One copy of the test result shall be submitted to the EPA at:

Associate Director
Office of Air Enforcement (3AP13)
U.S. Environmental Protection Agency
Region III
1650 Arch Street
Philadelphia, PA 19103-2029

Condition V.C.2.:

Upon request by the DEQ, the permittee shall conduct additional visible emission evaluations from the Syn Fuel Facility to demonstrate compliance with the visible emission limits contained in Condition V.A.5. The details of the test shall be arranged with the Director, Valley Regional Office

Section VIII: The General Conditions have been updated per current boilerplate language.

PUBLIC PARTICIPATION

The public participation requirements of 9 VAC 5-80-670 apply to significant permit modifications. Accordingly, a 30-day public comment period was announced in the Charlottesville ***Daily Progress*** on July 00, 2006. The public comment period expired on August 00, 2006 with comment/ or no comments being made.

9 VAC 5-80-690 requires that EPA and “affected states” be notified of the drafting of a significant modification to an Article 3 permit. EPA was notified by email on July xx, 2006. All persons on the Title V mailing list were also sent a copy of the public notice in letters dated July xx, 2006. EPA’s 45-day review period ended on September xx, 2006.

ATTACHMENTS

A - Minor NSR Permit dated July 29, 2005